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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. |
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09/280,601 03/29/99 YANG

Z OPT-20500

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IM62/0208

EXAMINER

SERGEANT, R

ART UNIT

PAPER NUMBER

1711

DATE MAILED:

02/08/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/280,601

Applicant(s)
Yang et al.

Examiner
Rabon Sergeant

Group Art Unit
1711



☒ Responsive to communication(s) filed on Nov 1, 1999

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire three month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 23-78 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 23-78 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is: ☐ approved ☐ disapproved.

☒ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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1. The amendment filed November 1, 1999 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: The catalyst species inserted at page 14, line 18 constitutes new matter, because the species does not correspond to the claimed species, dibutyltindilaurate.

Applicant is required to cancel the new matter in the reply to this Office action.

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 59-78 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-24 of U.S. Patent No. 6,008,296. Although the conflicting claims are not identical, they are not patentably distinct from each other because each set of claims is drawn to a composition comprising equivalent reactants.

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4. Claim 66 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The polyene of claim 66 does not correspond to the polyene formula of claim 61; therefore, the claim fails to further limit claim 61 and is indefinite in view of claim 61.

5. Claim 64 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Applicants have specified that R_3 is a group consisting of polyvalent aliphatic or alicyclic and aromatic hydrocarbon; however, the means used to define the group is ambiguous, because, due to the respective uses of "or" and "and", it is not clear when the hydrocarbon is aliphatic, alicyclic, or aromatic. For example, is the hydrocarbon either aliphatic or both alicyclic and aromatic?

6. Claim 71 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Applicants refer to a reaction catalyst; however, it should be specified that the catalyst is incorporated into the composition in some fashion.

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7. Claims 59-78 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Applicants have stated that R and R₄ may be substituted; however, the terminology renders the claims indefinite, because applicants have not specified what the substituents are.

The claims are further indefinite, because applicants have not specified chain lengths for the definitions of R, R₂, R₃, or R₄.

8. Claims 23-58 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The examiner has not found support for the range of polythiol compounds represented by formula (1) within claims 23, 27 and 55. Also, clear support has not been found for the terminology, "neither a hydroxyl group nor a mercapto group", within claims 23, 27, and 55.

Lastly, support has not been found for the ratio range of claims 26 and 30.

Despite applicants' response, support has not been provided for the aforementioned claimed subject matter, and applicants' application of the terms of the claims to the disclosure of the subject application is insufficient as a means of explaining that the terms have full support. For example, the single species, 1, 2, 3-propanetrithiol, is insufficient to provide support for all compounds encompassed by claimed formula (I).

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9. Despite applicants' statement within page 10 of the response of November 1, 1999, a 37 CFR 1.132 declaration has not been received by the Office.

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

11. Claims 59-64, 67-69, 75, 77 and 78 are rejected under 35 U.S.C. 102(b) as being anticipated by Goyert et al. ('884).

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Patentees disclose reactive compositions comprising polyisocyanates; active hydrogen compounds, such as polythiols, polyols, polyamines, etc.; and crosslinking agents, wherein the preferred crosslinking agents are triacrylates and tetraacrylates. See abstract and columns 4-8.

12. The examiner has considered applicants' arguments; however, applicants' claims are not limited in accordance with the arguments. The claims, as drafted, merely require the presence of the claimed reaction components and a polymer produced from the reaction components. Furthermore, applicants have not established that the "consisting essentially of" language patentably distinguishes the claims from the prior art.

13. Claim 59-65 and 67-78 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohkawa et al. ('967) in view of Kajimoto et al. ('387) or Kanemura et al. ('733) or Nagata et al. ('545).

Ohkawa et al. disclose optional molding compositions comprising a polythiol component and a polyene component, wherein the polyene component may be produced by reacting a polyisocyanate with an active hydrogen containing compound containing unsaturation. See abstract; column 5, line 50; column 7, lines 42+; and column 8.

14. Ohkawa et al. are silent regarding the specific reaction of isocyanate groups with the thiol groups of the polythiol component; however, the position is taken that the reference serves to teach that optical quality polymers may be produced from reaction constituents comprising polyenes, polythiols, and isocyanate components. Furthermore, the reference demonstrates that isocyanate-based reaction products are optically compatible with polyene-polythiol reaction products.

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15. Kajimoto et al., Kanemura et al., and Nagata et al. all disclose the production of optical quality lens articles by reacting polyisocyanates with thiol containing reactants. See abstracts. Therefore, the position is taken that since Ohkawa et al. disclose the reaction of polyenes and polythiols in the presence of isocyanate reaction products to yield optical quality compositions and since the reaction of polyisocyanates and polythiols was known at the time of invention to have been beneficial in the production optical quality compositions, one of ordinary skill in the art would have been motivated to combine the teachings of the primary and secondary references so as to yield a polymer having a blend of thiourethane and thioether linkages, because one would have expected high optical quality with the attendant advantages of both the prior urethane and polyene/polythiol reaction systems. Furthermore, it has been held that it is prima facie obvious to combine two compositions, each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition which is to be used for the very same purpose. In re Kerkhoven, 205 USPQ 1069.

16. The examiner has considered applicants' arguments; however, as with the previous art rejection of paragraphs 11 and 12, the position is again taken that applicants' arguments are not commensurate in scope with the claims. For example, applicants' claims do not specify the argued terpolymer. The claims merely refer to a polymer or resin product.

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Any inquiry concerning this communication should be directed to R. Sergent at telephone number (703) 308-2982.

Sergent/mm

February 4, 2000

Rabon Sergent
RABON SERGENT
PRIMARY EXAMINER